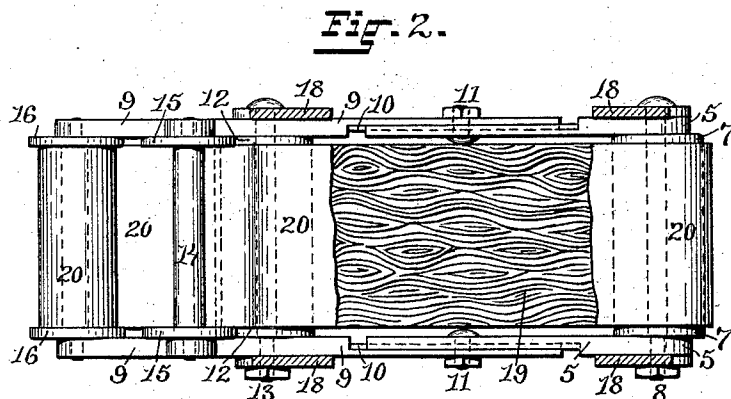
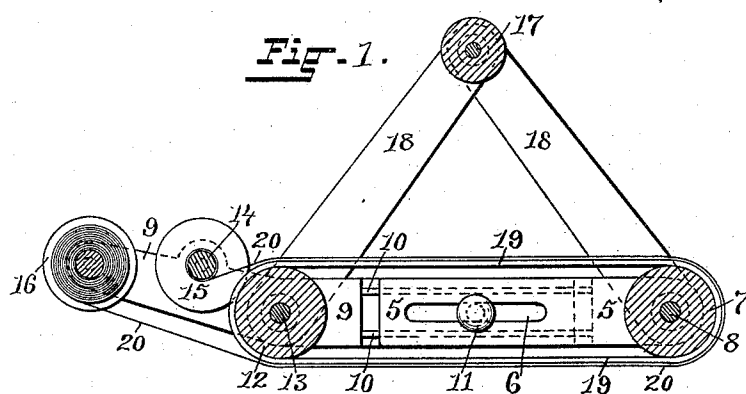


(No Model.)

J. MADDEN.
GRAINING MECHANISM.

No. 474,093.

Patented May 3, 1892.



WITNESSES:

Henry J. Miller
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UNITED STATES PATENT OFFICE.

JOSEPH MADDEN, OF PROVIDENCE, RHODE ISLAND.

GRAINING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 474,093, dated May 3, 1892.

Application filed November 17, 1891. Serial No. 412,136. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MADDEN, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Graining Mechanism; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in devices by which painted surfaces may be grained.

The object of this invention is to produce a device by which an outer layer or coat of paint may be removed in part to represent the grain of natural wood.

The invention consists in the peculiar features of construction whereby an endless belt carrying the graining design and a band covering said design are moved over the painted surface to remove the upper undried coat of paint on the lines of the design, as will be hereinafter more clearly specified, and pointed out in the claims.

Figure 1 represents a longitudinal sectional view of my improved device. Fig. 2 represents a top view of the same, a portion of the paint-removing band being broken away to show the endless belt and the graining design thereon.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 5 5 indicate two side arms of a frame. These arms have longitudinal grooves cut in their outer surfaces and have the slots 6 6 cut through the thickness of the metal of which they are formed. Between the ends of these arms is secured the roller 7, which is covered with rubber or some similar yielding material and revolves on the shaft 8, the ends of which are fastened through the arms 5 5. The arms 9 9 of the frame are bent upward at their rear ends and have the longitudinal ribs 10 10 on their inner surfaces to engage in the longitudinal grooves of the arms 5 5 and slots which correspond to the slots 6 6 of the arms 5 5, said arms being secured together by the clamping devices 11 11, working in said slots and which allow the extension of said frame. At the points where the arms 9 9 of the frame are bent upward is

secured the roller 12, of similar construction to that marked 7 and journaled on the shaft 13, the ends of which extend through the side arms of the frame and are fastened in a suitable manner. The roller 14 is journaled on a shaft the ends of which are secured in the side frames and has the circular flanges 15 15, which bear against the end surfaces of the roller 12, and is adapted to be driven by such contact when the roller 12 is revolved. The roller 16 is journaled on a shaft secured in the rear upper ends of the arms 9 9. One end of the shaft carrying this roller 16 may be threaded to engage a threaded perforation in one of the frame-arms, while the other end may have a thumb-nut, by which the shaft may be turned to unscrew the threaded end, and thus remove the shaft and roller when empty. The frame thus formed is provided with the cross-handle 17, which is supported on four side arms 18 18, which are pivoted in pairs to the ends of the handle and at their lower ends are pivotally secured on the shafts 8 and 13, the pivoting of these arms allowing the ends to be spread by the extension of the frame.

Over the rollers 7 and 12 is stretched an endless belt 19, formed of any suitable material and having a raised graining design formed on its surface, and around the roller 16 is wound a strip 20 of cotton cloth or other absorbent material, the loose end of which is carried around the outer surface of the belt 19 and secured on the roller 14.

When a surface is to be painted to represent the grain of hard wood, a ground coat of paint is first applied and allowed to dry. This ground coat is then covered by the graining coat, the removal of which in lines indicates the natural grain. After the graining coat has been applied I pass my improved graining device over it in the proper direction. As the rollers 7 and 12 are revolved by pressure on the surface the belt 19 will be carried along and those portions of the band 20 covering the raised graining design on said belt will be forced in contact with the moist paint and will absorb the same, thus bringing to view the lower coat of paint at these points. As the roller 12 is revolved motion is imparted to the roller 14 by means of the flanges 15, and this roller will take up the band 20, the

surface carrying the paint being wound inside, it not being necessary to take up this band quite as fast as it is unwound from the roller 16.

5 The frame is made extensible in order that belts of different lengths may be placed over the rollers 7 and 12 and that these belts may be tightly stretched.

10 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

15 1. In a graining-machine, the combination, with an endless belt having a raised graining design carried on rollers revolving on shafts secured in an extensible frame, of a band of absorbent material carried between the grain-
ing design and the surface to be grained, as and for the purpose described.

2. The combination, with the rollers 7 and 12, journaled on shafts secured in the frame 20 formed by the arms 5 5 and 9 9 and carrying the endless belt 19, having a raised graining design thereon, of the rollers 14 and 16, journaled on shafts secured in the arms 9 9, and the band 19 of absorbent material adapted to 25 be operated by the flanges 15, secured to the end portions of the roller 14 and bearing against the roller 12, as and for the purpose described.

In witness whereof I have hereunto set my 30 hand.

JOSEPH MADDEN.

Witnesses:

JOSEPH A. MILLER, Jr.,
HENRY J. MILLER.